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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,201	08/21/2003	Jade M. Kizer	RBUS 1305-1	7115
38342	7590	06/07/2005	EXAMINER	
RAMBUS, INC. c/o HAYNES BEFFEL & WOLFELD LLP			NGUYEN, BRIAN D	
P.O. BOX 336			ART UNIT	
HALF MOON, CA 94019			PAPER NUMBER	
			2661	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/645,201	KIZER, JADE M.	
	Examiner	Art Unit	
	Brian D. Nguyen	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8.11.12/03:4.7.8/04</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 25-36, 38-40, 44-45, and 47 are objected to because of the following informalities:

Claim 25, lines 11 and 17, it is suggested to replace “the N line bus” with --the first N line bus--.

Claim 30, lines 3, 4, and 6, it is suggested to replace “the N line bus” with --the first N line bus--.

Claim 31, lines 3, 4, and 6, it is suggested to replace “the N line bus” with --the second N line bus--.

Claims 38-40 and 44-45, “communication line (n)” in lines 2, 4, and 6 of claim 38; line 2 of claim 39; line 3 of claim 40; line 2 of claim 44; and line 2 of claim 45 seems to refer back to “communication line (n)” in line 4 of claim 37. If this is true, it is suggested to change “communication line (n)” with --the communication line (n)--.

Claim 47, line 9, “the receiver” seems to refer back to “receivers” in line 8. If this is true, it is suggested to change “the receiver” to --the receivers--.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claims 25-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 recites the limitation "the set of transmitter signal lines" in lines 14-15. There is insufficient antecedent basis for this limitation in the claim. "the set of signal lines" in lines 21 and 22 is unclear which set of signal lines mentioned in lines 6 and 19 the applicant is referring to. "the switch" in line 26 is unclear which switch mentioned in lines 11 and 25 the applicant is referring to.

Claim 30, "the switch" in line 2 has the same problem as the switch in claim 25.

Claim 31, "the switch" in line 2 has the same problem as the switch in claim 25.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-8, 10-15, 18-20, 22-27, 30-32, 35-39, 41-43, and 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Sessions (6,606,576).

Regarding claims 1 and 13, Sessions discloses a signal interface (102, 104) comprising a set of signal lines having N+1 (M) signal lines; N+1 receivers/transmitter coupled to respective signal lines in the set of signal lines establishing a set of N+1 signal paths with the set of signal

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lines (see paths a-I in figure 2); an N line bus (see parallel data bus in col. 2, line 32); a line maintenance circuit (the additional calibration path); and a switch in the N+1 signal paths, and control logic for the switch (the select logic 210), which selectively routes N signal paths in the set to the N line bus and signal path (n) in the set to the line maintenance circuit, where (n) is changed according to a pattern to selectively maintain signal paths in the set of N+1 signal paths while enabling data flow on N signal paths in the set to the N line bus (see col. 4, lines 27-52).

Regarding claims 2-3, and 14-15, Sessions discloses a periodic/repeating pattern (see rotating pattern in col. 2, line 62-col. 3, line 5).

Regarding claims 4-5, Sessions discloses receiving clock signal (see col. 1, lines 54-57) and the line maintenance circuit sets the adjustable clock generator in response to a calibration data pattern on the signal path coupled to the line maintenance interface (see col. 2, lines 56-61).

Regarding claims 6 and 18, Sessions discloses switching the functions of the first and second paths between the data path and the calibration path (see col. 7, lines 6-28).

Regarding claims 7 and 19, Sessions discloses the control logic (processor 240) at the receiver coordinates the pattern with a processor 208 at the source through line 250 (see figure 2).

Regarding claims 8 and 20, Sessions discloses a single integrated circuit (see col. 1, line 21-25; col. 3, lines 57-62).

Regarding claims 10-11 and 22-23, Sessions discloses the transmission is a high-speed transmission (see abstract). Note that that the data rate higher than 100 MegaHertz is a high-speed transmission.

Regarding claims 12 and 24, Sessions discloses a source synchronous clock (see col. 1, lines 53-57).

Regarding claims 25-27, 30-32, and 35-36, claims 25-27, 30-32, and 35-36 are system claims that combine the limitations of the receiver and transmitter claims described in claims 1-3, 6-7, 10, 12-13, 18-19, 22. Therefore, they are subject to the same rejection.

Regarding claims 37-39, 41-43, and 46, claims 37-39, 42-43, and 46 are method claims corresponding to system claims 25-27, 30 and 36. Therefore, they are subject to the same rejection.

Regarding claim 47, Sessions discloses a signal interface, comprising: a set of signal lines (A-I in figure 2); a set of receivers coupled to respective signal lines in the set of signal lines; a bus comprising a set of bus lines (see, for example, 8-bit parallel data in col. 5, line 20); a line maintenance circuit (the calibration path); and a switch coupled to the set of receivers, to the bus and to the line maintenance circuit, and control logic for the switch, which selectively routes signals in parallel from receivers in the set of receivers to bus lines in the set of bus lines and to the line maintenance circuit, where the receiver in the set of receivers routed to the line maintenance circuit is changed according to a pattern to selectively maintain signal paths over said set of signal lines (see col. 5, line 15-col. 6, line 29).

Regarding claims 48 and 49, Sessions discloses a transmission and receiver circuits on integrated circuits comprising a line maintenance circuit; a set of signal lines; a set of transmitter and receivers; a switch; and a control logic to selectively route the set of signal lines and the maintenance line in parallel (see col. 5, lines 15-col. 6, line 29).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9, 21, 33-34, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sessions in view of Pedyash et al (2004/0217881).

Regarding claims 9, 21, 33-34, and 40, Sessions discloses that a calibration process can be performed when the signal path is taken out of service (power-down mode) (see col. 2, lines 8-15). Sessions does not specifically disclose a power-down logic to power down the receivers. However, this feature is well known in the art. Pedyash discloses a power down switch that can power down some or all of the module components or wake up the module (see paragraph 0110). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the power switch as taught by Pedyash in the system of Sessions to conserve power.

8. Claims 16-17, 28-29, and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sessions in view of Keeth et al (6,889,357).

Regarding claims 16-17, 28-29, and 44-45, Sessions does not specifically disclose a pseudo random signal pattern is adapted for calibration of receive clock signal. However, Keeth discloses this feature (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the pseudo random signal pattern as taught by Keeth in the system of Sessions to ensure optimal operation of the device.

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***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lopez (5,111,208); Johnson et al (6,434,081) ; and Olarig et al (6,484,232).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



6/1/05

**BRIAN NGUYEN**  
**PRIMARY EXAMINER**